EDITORIAL ARTICLES.

THE PROGNOSIS AND STATISTICS OF OPERATIONS FOR CARCINOMA OF THE RECTUM.

Rectal surgery has been the subject of careful study latterly by many German surgeons. In the ANNALS OF SURGERY for last February reference was made at length to the work in this direction of Bardenheuer, Schuchardt and Esmarch. From the Göttingen clinic two important papers[1] have more recently appeared. In an elaborate memoir, read before the last Congress of German Surgeons, Professor Koenig fully considered the recent advance in our knowledge of the history of carcinoma and the work of the German Society of surgeons in this field, and his paper was thoroughly discussed by his confreres. He noted those points made clearer by recent advances, showing the improved prognosis after operations necessary for the removal of carcinomatous growths. This is true of all operations on the open surface of the body whereas the cavities clothed with mucous membrane have continued an unfavorable field. Here thorough antisepsis is difficult. The prognosis of recovery divides itself first into the limited recovery in which the patient remains free from a return of the disease for 2, 3 or 4 years. This limited recovery is of the highest moment both to the physician and the patient if we consider that most patients are attacked with carcinoma only in the second half of life. While we can give abundant statistics concerning this first class of patients, there is little certainty in the second class of definitely cured cases—in a scientific sense those in which after a prolonged life no return of the disease has

[1]Einige Bemerkungen zur Prognose der Carcinom Operation mit besondere berücksichtigung des Carcinoma Recti, von Dr. F. KÖENIG (Göttingen). *Beilage zum Centralblatt f. Chirurgie*, No. 24, 1888.

Zur Statistik der Rectum Carcinome, von Dr. O. HILDEBRAND (Göttingen). *Zeitschrift f. Chirurgie*, bd. 27, hft. 3 u. 4.

occurred, either in the place of operation, glands or metastases. The schematic time of two or three years is not sufficient to clear this question. If we take the 66 cases of amputation of the breast performed in the Göttingen clinic in which there was a return of the disease (carcinoma) it is found that half of those suffering from carcinoma of the breast show a return of the disease the first six months after operation: One third were attacked in the second six months and at the end of the first year 52 showed a return of the disease. Seven of the remainder were attacked at the end of the third year. Three showed a return at the end of 4, 5 and 10½ years respectively. The author assumes that in these late returns we have a development of germs for a long time inactive in the cicatrix or glands pertaining to the same. It is to be supposed that a continuation of these observations through a long series of years would bring many cases to light similar to those shown in statistics of the author. It can be assumed that 30 per cent of all operated cases remain healthy for 3 years.

In cases of carcinoma of the mucous canals we have few facts established; in carcinoma recti reliable statistics are still wanting. In face of the favorable prognosis of a recent author who places the mortality at 8 per cent the author thinks the mortality after the operation still high. The prognosis as to a return of the disease is still less favorable than in carcinoma of the mamma and the prognosis as to function is bad. Of 77 cases of cancer of the rectum in the Göttingen clinic 17 were rejected as inoperable; 60 were operated upon. In the latter the anus with part of the rectum was removed and in 44 the rectum was resected. The peritoneum was opened in 15 cases but in only one case did peritonitis follow. Great stress was laid on preparatory treatment. (diet of food leaving little residue, cathartics), for from 4-8 days previous to operation. The operation was performed mostly in the lithotomy position with the posterior raphe incision and extirpation of the rectum. The intestinal stump was freed as much as possible with the finger far above the peritoneal reflection,—a procedure easy to carry out on the anterior wall. The number of ligatures varied from 2-10 and the glands posterior to the rectum were removed as much as possible with the surrounding fat tissue. The wound was irrigated after

operation with a solution of salicylic or carbolic acid, powdered with iodoform and after a few sutures packed with iodoform or, after deep suturing of the intestine to the external wound, drained. The latter method has been resumed on account of the bad prognosis in packing. By the above method the mortality was 24 per cent though in the past six years this figure has been reduced one half. Ten per cent were free from a return of disease for over 3 years, 18 per cent for 2 years. Of 21 patients examined in 4 of whom the rectum was extirpated, continence was absent in all and one patient in addition had stenosis. Two of the resected cases have symptoms of stenosis, nine are almost unable to retain feces, and in 6 the continence is bearable under the above circumstances. Colotomy must be strongly recommended to the inoperable cases. The operation (colotomy, is not dangerous. Six deaths out of 21 operated cases of the author were divided as follows: Three from perforating peritonitis due to the carcinoma; one collapse; one from pneumonia, and one from peritonitis following the operation. The patients lived: $4\frac{1}{2}$ years, (1); $2\frac{1}{2}$ years, (1); 2 years, (2); and 1 year, (4), most of the cases with an anus functionating satisfactorily.

Dr. HAHN (Berlin) agreed as to the favorable results of colotomy but sews both the peripheral and central extremities of the colon to the external wound, so that in cases of non malignant stricture this may be treated afterwards with bougies and irrigation. Finally, after cure of the stricture the colotomy wound heals. He divides the spur between the portions of the colon with a modified Dupeytren clamp.

DR. BARDENHEUER (Cologne) had operated in 13 cases of carcinoma recti by his method. Continence was possible though not in all cases. Two of the cases had died of necrosis of the central portion of the gut.

DR. KOENIG replied that he had met with necrosis caused by too great traction on the intestine. This could be avoided.

DR. SCHEDE (Hamburg) operated according to the Kraske method leaving the sphincter and anus intact.

DR. KUSTER (Berlin) thought an additional colotomy unnecessary. He sews first anteriorly and then circularly with deep silk suture reaching the mucous membrane. A drain wrapped with iodoform gauze is then carried high into rectum and the wound thus protected from intestinal contents.

DR. HELFERICH (Greifswald) in carcinoma of the mamma, removes the axillary glands and in disease of these also the infra-clavicular glands by division of the pectoralis major, then sews the connective tissue with catgut. He thinks this the preferable method.

DR. GUSSENBAUER (Prag) thought that disease which appears after a long time in a cicatrix or gland is an infection *in locum minoris resistentiæ* (cicatrix). For some time past he has extirpated all glands in carcinoma of mamma and other cases of carcinoma and in rectal cases the whole cellular mass of the bony pelvis with glands. As far as the promontory, the cure of carcinoma by a thorough extirpation as above is well established.

DR. LOEBKER (Greifswald) thought the prognosis of the return of the disease is better in young subjects.

DR. v. BERGMANN (Berlin) cited Bramauns brochure on cancer of the rectum in which 26 recoveries in 27 cases were recorded. He thinks the dangers of extirpation of the rectum much lessened and prefers the operation to colotomy.

The paper of DR. HILDEBRAND presents a statistical review of the results of the clinic in Göttingen with a comparison of the cases published by other operators. The large majority of cases of carcinoma of the rectum (54 per cent) in the Göttingen clinic occurred between the ages of 40 and 60 years. Thirty per cent of these cases occurred between 60 and 80 years. As regards sex, 31.7 per cent were females. Of 69 cases of carcinoma of the rectum upon which this paper is based, only two were confined to the external anal ring. Among the tumors three melanotic carcinomata were found, a rare form of growth. Most of the carcinomata of the rectum were in form of a ring-like stricture, or again the growth took the shape of a cuirass as in the breast. Excluding the inoperable cases, in 54 operated cases the lymphatic glands of the surrounding area were affected in 24 cases. The author allowing for failures in diagnosis and operative removal of glands, would place the percentage of cases in which the glands were affected much higher. For in 13 cases of autopsy where the operator thought the glands had been thoroughly removed, this was proven to the contrary. It will not be exaggeration

to say that the lymphatic glands are affected by the disease in at least 50 per cent of the cases. The glands referred to are the perirectal lymphatics. There are meagre statistics as regards the inguinal glands.

Of these 69 cases which came to the clinic for operation, 15 were regarded as inoperable. In all cases where the carcinoma was confined to the anal ring, extirpation of the tumor with or without the removal of the external sphincter was performed. If the mucous membrane of the rectum was compromised, extirpation of the rectum was resorted to. When the sphincters were not affected, resection of the rectum alone was resorted to. There were two cases of the first, 13 of the second, and 39 of the third class. The operation of Kraske was not performed in any of the cases in the Göttingen clinic.

The rate of mortality immediately following this operation (57 cases) was 35, (20 cases). During the past six years the mortality only reached 14.9 per cent against 30 per cent of the previous six years. The preparation of the patient and the improvements in technique are accountable for this improved rate of mortality. The secretions of the wound are markedly improved in character through the application of the iodoform methods of dressing.

Of 54 patients, three remained free from symptoms for more than 3 years. Six for more than two years and eight over one year, and have up to date no return of disease. Of the whole number of patients, including those still living with a return of disease, at least 31 have lived free from symptoms for a period of three years. There are only three cases of definite cure, up to the date of the statistics (10 per cent) In the majority of cases recurrence of the disease occurs early, during the course of the first half year after operation.

As to the point at which the return of the growth began there are no definite data. In the greatest number of cases there was only partial return of the normal functions of the canal after operation. There was either incontinence or cicatricial stenosis of the anus. Continence without stenosis was uncommon, being present only in isolated cases. In four cases of extirpatio recti, incontinence was present in three, one having stenosis. In 17 cases of resection of the rectum with retention of the sphincter there are isolated instances of continence, but these soon acquired incontinence and stenosis.

The author concludes that in carcinoma recti the mortality after operation is high, the percentage of definitely cured cases small, and the restoring of function after operation bad. He pleads for a more careful selection of cases holding out the hope of definite cure. In the inoperable cases the object of the operation is to facilitate fecal evacuation, eliminate pain, retard the advance of the growth and cachexia. The artificial anus with eventual curetting of the growth aids to these ends. In 19 cases artificial anus was made in Koenig's clinic for stenosis. The operation is not dangerous but some cases died after it from perforating peritonitis (3), preumania (1), unknown causes (2). The functional result of operation was in all satisfactory, and in no case did the patient return to have his artificial anus closed.

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